



ELSEVIER

Chemical Geology 153 (1999) 297

**CHEMICAL
GEOLOGY**

INCLUDING
ISOTOPE GEOSCIENCE

Contents

Research Papers

Geochemistry of alkaline earth elements (Mg, Ca, Sr, Ba) in the surface sediments of the Yellow Sea G. Kim, H.-S. Yang and T.M. Church	1
Geochemical variation in peridotite xenoliths and their constituent clinopyroxenes from Ray Pic (French Massif Central): implications for the composition of the shallow lithospheric mantle N.A. Zangana, H. Downes, M.F. Thirlwall, G.F. Marriner and F. Bea	11
Determination of the origin and evolution of building stones as a function of their chemical composition using the inertia criterion based on an HJ-biplot J. Garcia-Talegon, M.A. Vicente, E. Molina-Ballesteros and S. Vicente-Tavera	37
Thermodynamic and pore water halogen constraints on gas hydrate distribution at ODP Site 997 (Blake Ridge) P.K. Egeberg and G.R. Dickens	53
High-resolution spectrometric analysis of rare earth elements-activated cathodoluminescence in feldspar minerals J. Götze, D. Habermann, R.D. Neuser and D.K. Richter	81
The genesis of the stable isotope (O, H) record in arc magmas: the Kamtchatka's case F. Pineau, M.P. Semet, N. Grassineau, V.M. Okrugin and M. Javoy	93
Chemical and boron isotopic composition of magmatic and hydrothermal tourmalines from the Sinceni granite–pegmatite system in Swaziland R.B. Trumbull and M. Chaussidon	125
REE, Y and U concentration at the fluid–iron oxide interface in late Cenozoic cryptodolines from Southern Belgium T. De Putter, J.-M. Charlet and Y. Quinif	139
Silicic glasses in hydrous and anhydrous mantle xenoliths from Western Victoria, Australia: at least two different sources M.E. Varela, R. Clocchiatti, G. Kurat and P. Schiano	151
²³⁸ U– ²³⁰ Th– ²²⁶ Ra disequilibria in the Lesser Antilles arc: implications for mantle metasomatism F. Chabaux, C. Hémond and C.J. Allègre	171
A thermodynamic model for the solubility of barite and celestite in electrolyte solutions and seawater to 200°C and to 1 kbar C. Monnin	187

Isotope Geoscience Section

Metal sources in the Middle Valley massive sulphide deposit, northern Juan de Fuca Ridge: Pb isotope constraints F.M. Stuart, R.M. Ellam and R.C. Duckworth	213
New analytical procedures to increase the resolution of zircon geochronology by the evaporation technique J.S. Dougherty-Page and J.M. Bartlett	227
High-resolution $\delta^{18}\text{O}$ analysis of tooth enamel phosphate by isotope ratio monitoring gas chromatography mass spectrometry and ultraviolet laser fluorination A.M. Jones, P. Iacumin and E.D. Young	241
Ion microprobe U–Pb dating of apatite Y. Sano, T. Oyama, K. Terada and H. Hidaka	249
The corrosion of basaltic dykes in evaporites: Ar–Sr–Nd isotope and rare earth elements evidence M. Steinmann, P. Stille, W. Bernotat and B. Knipping	259
An empirical method for the determination of single ion hydrogen isotope salt effects in aqueous electrolyte solutions T. Driesner and T.M. Seward	281

Technical note

Evaluation of the sulfur isotopic composition and homogeneity of the Soufre de Lacq reference material R.W. Carmody and R.R. Seal II	289
---	-----